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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/020,444	12/11/2001	Geoffrey Giles Furman	85941.000023	1689
23387	7590	11/21/2003		
Stephen B. Salai, Esq. Harter, Secrest & Emery LLP 1600 Bausch & Lomb Place Rochester, NY 14604-2711			EXAMINER MENGISTU, AMARE	
			ART UNIT 2673	PAPER NUMBER 2
DATE MAILED: 11/21/2003				

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/020,444

Applicant(s)

FURMAN, GEOFFREY GILES

Examiner

Amare Mengistu

Art Unit

2673

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_ 6) ☐ Other: \_\_\_\_

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the ***"Interrupt is hardware-based"; "Interrupt is software -based"*** must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### *Specification*

2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: ***"Interrupt is hardware-based"; "Interrupt is software -based"*** as, claimed in claims 2 and 3.

### *Claim Rejections - 35 USC § 103*

1. Claims 1,7-11, are rejected under 35 U.S.C. 103(a) as being unpatentable over **Richards (6,388,661)**.

AS to claims 1,7-11, **Richards** clearly teaches a display controller comprising: a connecting a display controller (figs.2b and 2c (308)) to CPU (figs.2b and 2c (314) and the display (figs.2b and 2c (204)), the CPU having a progressively organized pixel memory (figs.2b and 2c (310)). **Richards** did not expressly detailed that the controller provides an interrupt and scanning the pixel memory using an interrupt to control the scanning to provide scanned data to the display in a color field sequential mode. However, it would have been obvious to one skill in the art at the time of the invention was made to have recognize that the device of **Richards** clearly teaches a field sequential color system including an array of memory cells coupled to an array of pixel elements. The method includes each memory cell controls the state of one of the pixel elements with a multiple color fields. During each color field each of a plurality of rows of memory cells are updated by one or more of a plurality of update biplanes, each update bit plane having a predetermined weight, and simultaneously **blanking** (interrupting) all pixel elements one of more times during each separate color field for an interval having a predetermined duration (col.7, lines 11-46).

As to claims 2 and 3, the **blanking** (interrupting) method of **Richards** is a hardware- based. It is obvious that the blanking/interrupt could have been a software- base.

As to claim 4; the microprocessor and the controller are separate (figs.2b, 2c (308,314)); however, it is a choice of engineering design to make the microprocessor within the controller.

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2. Claims 5,6,12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Richards (6,388,661)** in view of **Comerford (4,592,059)**.

3. As to claims 5,6,12, and 13, **Richards** discloses a display (figs. 2a, 2b (308,204)), but has failed to teach D/A converter between a display and a controller and also D/A converter is R2R network. The patent of **Comerford** is cited to teach that it is conventional to have a D/A converter (fig.1 (30)) between a display (fig.1 (12 LED)) and a controller (fig. 1(28)) and D/A is R2R network (col.6, lines 23-24).

4. Therefore, it would have been obvious to one skilled in the art at the time of the invention was made to have been motivated to combine the **Comerford's** D/A converter into the system of Richards because this will supply a digitally programmable current source may supply a bias current for the injection of the laser.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amare Mengistu whose telephone number is (703)305-4880. The examiner can normally be reached on M-F,T-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on (703)305-4938. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-9600.



Amare Mengistu  
Primary Examiner  
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A.M  
Nov.14,2003